

## Effect of Composition on Work Hardening Coefficient of Bismuth-Lead Binary Alloy

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**Abstract :** In the present work, the alloy of Bismuth-lead is prepared on the basis of percentage of molecular weight 9:1, 5:5 and 1:9 ratios and grown by Zone- Refining Technique under a vacuum atmosphere. The EDAX of these samples are done and the results are reported. Micro hardness test has been used as an alternative test for measuring material's tensile properties. The effect of temperature and load on the hardness of the grown alloy has been studied. Further the comparative studies of work hardening coefficients are reported. In the present work, the alloy of Bismuth-lead is prepared on the basis of percentage of molecular weight 9:1, 5:5 and 1:9 ratios and grown by Zone- Refining Technique under a vacuum atmosphere. The EDAX of these samples are done and the results are reported. Micro hardness test has been used as an alternative test for measuring material's tensile properties. The effect of temperature and load on the hardness of the grown alloy has been studied. Further the comparative studies of work hardening coefficients are reported.

**Keywords :** EDAX, hardening coefficient, micro hardness, Bi-Pb alloy

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